PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

RECEIVED
0 6 AUG 2004
WIPO   PCT

Applicant's or agent's file reference A2421PC	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)

International application No. PCT/FI 03/00147	International filing date *(day/month/year)* 28.02.2003	Priority date *(day/month/year)* 30.04.2002

International Patent Classification (IPC) or both national classification and IPC H04L29/06

Applicant TELEFONAKTIEBOLAGET L M ERICSSON (PUBL)

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 10 sheets.

3. This report contains indications relating to the following items:

   I   ☒   Basis of the opinion

   II   ☐   Priority

   III   ☐   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   IV   ☐   Lack of unity of invention

   V   ☒   Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   VI   ☐   Certain documents cited

   VII   ☐   Certain defects in the international application

   VIII   ☐   Certain observations on the international application

Date of submission of the demand 13.11.2003	Date of completion of this report 05.08.2004

Name and mailing address of the International preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Günther, S Telephone No. +49 89 2399-6962

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):*

Description, Pages

1, 2, 8-11	as originally filed
3A, 4A, 5A, 6A, 7A	received on 16.07.2004 with letter of 16.07.2004

Claims, Numbers

1-24	received on 16.07.2004 with letter of 16.07.2004

Drawings, Sheets

1/2-2/2	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description,   pages:

   ☐ the claims,   Nos.:

   ☐ the drawings,   sheets:

5. ☐   This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-24
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-24
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-24
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V
Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1.   Reference is made to the following document:

    D1:   WO 01/31903 A

2.   It is considered that the present invention meets the criteria of Article 33(1) PCT
    with regard to novelty, inventive step and industrial applicability.

3.   The subject-matter of claim 1 is new and is considered to be inventive, Article
    33(2) and (3) PCT, since the prior art cited in the International Search Report does
    neither disclose or suggest the claimed method of establishing anonymous
    communication in an IP based network.

3.1. D1 discloses requesting, providing, announcing a temporary anonymous
    subscriber identity, initiating and establishing one anonymous communication path
    towards the temporary anonymous identity, initiating and establishing another
    anonymous communication path towards the subscriber identity and suppressing
    the subscriber identity.

3.2. The subject-matter of claim 1 in the present application differs from the disclosure
    in D1 in requesting, reserving, providing, announcing a temporary SIP address;
    initiating and establishing a communication path towards the temporary SIP
    address using the subscriber identity associated with the temporary SIP address.

3.3. The problem to be solved by the present invention is to introduce unified
    anonymous communication in an IP based network.

3.4. The solution is not obvious from the above mentioned prior art. D1 does not
    support real-time communication in IP networks. Instead, D1 points out that the
    end quality of voice over IP networks is not satisfactory, and introduces a call
    broker, which calls and hides the real subscriber identities.

The remaining documents cited in the International Search Report disclose further different technical solutions to establish an anonymous communication. Either the real SIP addresses are suppressed in the network to achieve a certain degree of anonymity, or temporary call IDs are used to manage anonymous voice calls.

4.   The features of independent apparatus claim 13 entirely correspond to the method steps of claim 1. Therefore, the subject-matter of claim 13 is also new and inventive, Article 33(2) and (3) PCT.

5.   Claims 2-12, 14-24 are dependent on method claim 1 and apparatus claim 13, and as such also meet the requirements of PCT, Article 33(2) and (3) PCT.

6.   Remarks

6.1.   Although claims 1, 13 are drafted in the two-part form, the features known from the prior art (see 3.1.) are not placed in the preamble, Rule 6.3(b) PCT.

3AII

anonymous temporary subscriber identity and for a dual
anonymous communication system. This need exists both in
present circuit-switched wireline and wireless networks as
well as in IP based networks.

5

The European patent application EP 984 608 shows, as re-
ferred to as a prior art, one solution relating to a call
broker for providing telephone communications using online
communication. The disclosed solution presents a solution,
10   where in an on-line text chat environment one can estab-
lishm a telephone link to one of the chat participants
with the help of a call broker equipment.

The IETF SIP WG Internet draft "SIP Extensions for Caller
15   Identity and Privacy" by Marshall et al. shows, as re-
ferred to as a prior art, extensions to SIP that enable
parties in a SIP session to be identified by different
types of party information, which are authenticated by a
trusted entity. The specification draft shows solutions,
20   where delivery of party information can be suppressed.

The prior art solutions do not present a solution for a
communications network based method for providing a commu-
nications network subscriber with an anonymous temporary
25   subscriber identity or a solution for a dual anonymous
communication system.

Summary of the present invention

30   It is an object of the present invention to overcome or at
least mitigate the disadvantages of the prior art. The
present invention realizes a communications network based
method for providing a communications network subscriber
with an anonymous temporary subscriber identity and a dual
35   anonymous communication system.

4AII

According to a first aspect of the present invention there
is presented a method for providing a subscriber with an
anonymous subscriber identity, for use in an IP communica-
tions network having an originating party A and a termi-
5   nating party B connected to the network, in which the
method comprises the steps of

-       the terminating party B requesting a temporary SIP
address (SIP, Session Initiation Protocol) to be used as
an anonymous subscriber identity,

10   -   the IP communications network reserving a temporary
SIP address to which the regular subscriber identity of
the terminating party B is associated,

-       an application server providing the temporary SIP ad-
dress to the terminating party B,

15   -   the terminating party B announcing the received tem-
porary SIP address in an open forum,

-       the originating party A initiating an anonymous com-
munication path towards the temporary SIP address of the
terminating party B,

20   -   the originating party A suppressing the subscriber
identity in the communication path set up, and

-       the IP communications network establishing an anony-
mous communication path between the originating party A
and the terminating party B for anonymous communication

25   between two parties using any type of bearer available for
communication between two parties in an IP based network,
and using the subscriber identity of the terminating party
B associated with the temporary SIP address.

30   Preferably, in the method according to present invention,
the terminating party B requests the temporary SIP address
via Internet. Alternatively, the terminating party B re-
quests the temporary SIP address via an SMS-interface
(SMS, Short Message Service). Alternatively, the terminat-

35   ing party B requests the temporary SIP address via a WAP-
interface (WAP, Wireless Application Protocol). Alterna-

5AII

tively, the terminating party B requests the temporary SIP
address by dialing a number in the IP communications net-
work. Alternatively, the terminating party B requests the
temporary SIP address via an email-interface. Preferably,
5 . the terminating party B requests several temporary SIP ad-
dresses.

Preferably, in the method according to present invention,
the terminating party B announces the received temporary
10   SIP address in Television. Alternatively, the terminating
party B announces the received temporary SIP address in a
restricted open forum. More preferably, the restricted
open forum is the service providing the temporary SIP ad-
dress.

15

Preferably, in the method according to present invention,
the terminating party B terminates the temporary SIP ad-
dress. Preferably, the the use of an temporary SIP address
is disabled for a time period.

20

According to a second aspect of the present invention
there is presented an arrangement for providing a sub-
scriber with an anonymous subscriber identity, for use in
an IP communications network having an originating party A
25   and a terminating party B connected to the network, in
which arrangement
-       the terminating party B having means for requesting a
temporary SIP address (SIP, Session Initiation Protocol)
to be used as an anonymous subscriber identity,
30   -   the IP communications network having means for re-
serving a temporary SIP address to which the regular sub-
scriber identity of the terminating party B is associated,
-       an application server having means for providing the
temporary SIP address to the terminating party B,

6AII

- the terminating party B having means for associating his regular subscriber identity with the temporary SIP address,

- the terminating party B having means for announcing
5 the received temporary SIP address in an open forum,

- a originating party A having means for initiating an anonymous communication path towards the temporary SIP address of the terminating party B,

- a originating party A having means for suppressing
10 the subscriber identity in the communication path set up, and

- the IP communications network having means for establishing an anonymous communication path between the originating party A and the terminating party B for anonymous
15 communication between two parties using any type of bearer available for communication between two parties in an IP based network, and using the subscriber identity of the terminating party B associated with the temporary SIP address.

20

Preferably, in the arrangement according to present invention, the terminating party B has means for requesting the temporary SIP address via Internet. Alternatively, the terminating party B has means for requesting the temporary
25 SIP address via an SMS-interface (SMS, Short Message Service). Alternatively, the terminating party B has means for requesting the temporary SIP address via a WAP-interface (WAP, Wireless Application Protocol). Alternatively, the terminating party B has means for requesting
30 the temporary SIP address by dialing a number in the IP communications network. Alternatively, the terminating party B has means for requesting the temporary SIP address via an email-interface. Preferably, the terminating party B has means for requesting several temporary SIP ad-
35 dresses.

7AII

Preferably, in the arrangement according to present invention, the terminating party B has means for announcing the received temporary SIP address in Television. Alternatively, the terminating party B has means for announcing
5   the received temporary SIP address in a restricted open forum. More preferably, the restricted open forum is the service providing the temporary SIP address.

Preferably, in the arrangement according to present invention,
10 tion, the terminating party B has means to terminate the temporary SIP address. Preferably, the use of an temporary SIP address is disabled for a time period.

Brief description of the drawings
15

For a better understanding of the present invention and in order to show how the same may be carried into effect reference will now be made to the accompanying drawings, in which:
20   Figure 1 illustrates a dual anonymous communication system according to the present invention implemented in an IP based network.
        Figure 2 illustrates a method for providing a communications network subscriber with an anonymous temporary
25 subscriber identity according to the present invention.

12AII

Claims

1.   A method for providing a subscriber with an anonymous
subscriber identity, for use in an IP communications net-
5   work having an originating party A and a terminating party
B connected to the network, the method being characterized
in that the method comprises the steps of
-    the terminating party B requesting a temporary SIP
address to be used as an anonymous subscriber identity
10   (7),
-    the IP communications network reserving a temporary
SIP address to which the regular subscriber identity of
the terminating party B is associated (8),
-    an application server providing the temporary SIP ad-
15   dress to the terminating party B (9),
-    the terminating party B announcing the received tem-
porary SIP address in an open forum (10),
-    the originating party A initiating an anonymous com-
munication path towards the temporary SIP address of the
20   terminating party B,
-    the originating party A suppressing the subscriber
identity in the communication path set up, and
-    the IP communications network establishing an anony-
mous communication path between the originating party A
25   and the terminating party B for anonymous communication
between two parties using any type of bearer available for
communication between two parties in an IP based network,
and using the subscriber identity of the terminating party
B associated with the temporary SIP address (12).
30

2.   A method according to claim 1, characterized in that
the terminating party B requests the temporary SIP address
via Internet.

13AII

3.   A method according to claim 1, characterized in that
the terminating party B requests the temporary SIP address
via an SMS-interface.

5   4.   A method according to claim 1, characterized in that
the terminating party B requests the temporary SIP address
via a WAP-interface.

5.   A method according to claim 1, characterized in that
10   the terminating party B requests the temporary SIP address
by dialing a number in the IP communications network.

6.   A method according to claim 1, characterized in that
the terminating party B requests the temporary SIP address
15   via an email-interface.

7.   A method according to any of the claims 1-6, charac-
terized in that the terminating party B requests several
temporary SIP addresses.
20

8.   A method according to any of the claims 1-7, charac-
terized in that the terminating party B announces the re-
ceived temporary SIP address in Television.

25   9.   A method according to any of the claims 1-7, charac-
terized in that the terminating party B announces the re-
ceived temporary SIP address in a restricted open forum.

10.   A method according to the claim 9, characterized in
30   that the restricted open forum is the service providing
the temporary SIP address.

11.   A method according to any of the claims 1-10, char-
acterized in that the terminating party B terminates the
35   temporary SIP address.

14AII

12.   A method according to any of the claims 1-11, characterized in that the use of an temporary SIP address is disabled for a time period.

5 13.   An arrangement for providing a subscriber with an anonymous subscriber identity, for use in an IP communications network having an originating party A and a terminating party B connected to the network, the arrangement being characterized in that

10 -   the terminating party B having means for requesting a temporary SIP address to be used as an anonymous subscriber identity,

-    the IP communications network having means for reserving a temporary SIP address to which the regular subscriber identity of the terminating party B is associated,

15 -   an application server having means for providing the temporary SIP address to the terminating party B,

-    the terminating party B having means for associating his regular subscriber identity with the temporary SIP address,

20 -   the terminating party B having means for announcing the received temporary SIP address in an open forum,

-    a originating party A having means for initiating an anonymous communication path towards the temporary SIP address of the terminating party B,

25 -   a originating party A having means for suppressing the subscriber identity in the communication path set up, and

-    the IP communications network having means for establishing an anonymous communication path between the originating party A and the terminating party B for anonymous communication between two parties using any type of bearer available for communication between two parties in an IP based network, and using the subscriber identity of the terminating party B associated with the temporary SIP address.

15AII

14.   An arrangement according to claim 13, characterized
in that the terminating party B has means for requesting
the temporary SIP address via Internet.

5

15.   An arrangement according to claim 13, characterized
in that the terminating party B has means for requesting
the temporary SIP address via an SMS-interface.

10   16.   An arrangement according to claim 13, characterized
in that the terminating party B has means for requesting
the temporary SIP address via a WAP-interface.

17. An arrangement according to claim 13, characterized
15   in that the terminating party B has means for requesting
the temporary SIP address by dialing a number in the IP
communications network.

18.   An arrangement according to claim 13, characterized
20   in that the terminating party B has means for requesting
the temporary SIP address via an email-interface.

19.   An arrangement according to any of the claims 13-18,
characterized in that the terminating party B has means
25   for requesting several temporary SIP addresses.

20.   An arrangement according to any of the claims 13-19,
characterized in that the terminating party B has means
for announcing the received temporary SIP address in Tele-
30   vision.

21.   An arrangement according to any of the claims 13-19,
characterized in that the terminating party B has means
for announcing the received temporary SIP address in a re-
35   stricted open forum.

16AII

22.   An arrangement according to the claim 21, character-
ized in that the restricted open forum is the service pro-
viding the temporary SIP address.

5   23.   An arrangement according to any of the claims 13-22,
characterized in that the terminating party B has means to
terminate the temporary SIP address.

24.   An arrangement according to any of the claims 13-23,
10   characterized in that the use of an temporary SIP address
is disabled for a time period.